Savitribai Phule Pune University

(Formerly University of Pune)

Bachelor of Arts (B.A.) in Geography

(Faculty of Science & Technology)

New Syllabus of F.Y. B. A. Geography

(As Per National Education Policy (NEP) 2020)

For Colleges Affiliated to Savitribai Phule Pune University

To be implemented from Academic Year 2024-2025

Approved by

Board of Studies (BOS) in Geography,

Savitribai Phule Pune University, Pune

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Abbreviation Used

- **NEP**
  - National Education Policy
- **DSE**
  - Discipline Specific Courses
- **T**
  - Theory Courses
- **P**
  - Practical Courses
- **GE/OE**
  - Generic Elective/Open Elective
- **SEC**
  - Skill Enhancement Courses
- **IKS**
  - Indian Knowledge System
- **AEC**
  - Ability Enhancement Courses
- **VEC**
  - Value Education Courses
- **CC**
  - Co-curricular Courses
- **OJT**
  - On Job Training
- **CEP**
  - Community Engagement Programme
- **FP**
  - Field Projects
- **RM**
  - Research Methodology
- **RP**
  - Research Projects
- **VSC**
  - Vocational Skill Courses

Introduction to Undergraduate Degree in Geography

As per the recommendations of UGC and Savitribai Phule Pune University guidelines, the undergraduate(UG) degree course in Geography is a 6-semester course for 3-academic years or 8-semester course for 4-academic years. The curriculum framework design is as per UGC, Savitribai Phule Pune University, NEP 2020 guidelines with the approach of student-centric Teaching-Learning Process (TLP). B.A. Geography course involves theory, practical's, vocational and skill-based verticals. The expected programme specific outcomes outline with graduate attributes. The vision of NEP followed to enable the interdisciplinary and multidisciplinary approach within the syllabus structure. Students have appropriate flexibility in pursuing various courses and multiple entry/exit at UG level.

Award of UG Certificate/ UG Diploma/ Bachelor's Degree in Geography

Sr. No.	Type of Award	Stage of Exit OR Continue with Major and Minor
1	UG Certificate in Geography	Exit Option: After successful completion of first year; Award of UG Certificate with 44 credits and an additional 4 credits Course NSQF courses/Internship Continue Option: From the DSE courses Students will select Geography subject among the (Subject-1, Subject-2 and Subject-3) as a major and another as minor and third subject will be dropped.
2	UG Diploma in Geography	After successful completion of Second year; Award of UG Diploma in Major and Minor with 88 credits and an additional 4 credits Course NSQF courses/Internship OR Continue with Major and Minor
3	Bachelor of Arts in Geography	After successful completion of Third year; Award of UG Degree in Major with 132 credits and an additional 4 credits Course NSQF courses/Internship OR Continue with Major and Minor
4	Bachelor of Arts in Geography (Honors)	After successful completion of Semester Fourth year Award of UG Degree (Honours) in Major with 176 credits and an additional 4 credits Course NSQF courses/Internship

Objectives of the B.A. Geography Programme

1. To familiarize students with fundamentals concepts and principles of Geography
2. To guide students in an identification and analysis of various facets of geographical features and processes.
3. To enhance students ability in spatial analysis, relationship between people, places and environment.
4. To develop critical thinking and problem-solving skills, analytical and scientific reasoning, reflective thinking, moral & reflective awareness amongst the students.
5. To facilitate the students to learn skills of cartographic techniques, data analysis and interpretation, carrying out field work, use of Geoinformatics techniques, research projects, applications and applied studies.

Programme Specific Outcomes: B.A. Geography

Sr. No.	PSO Statement : After completing the B.A. in Geography, Students will be able to	Knowledge and Skills
PSO 1	Illustrate the geographical concepts and theories, practicals, regional approach focus on global, continental, countrywide and statewide	Disciplinary knowledge
PSO 2	Understanding the ethical consideration in geographic research and environment values in developing sustainable resolves	Moral & ethical awareness
PSO 3	Interpret the spatial relationships between places, people and environment	Spatial analysis skills
PSO 4	Apply geographic knowledge and skills to solve real-world problems and issues	Critical thinking & Problem Solving Ability
PSO 5	Analyze and interpret spatial data using GIS, Remote sensing and cartographic techniques	Analytical reasoning / digitally literacy
PSO 6	Appraise geographic issues and regional to global perspectives in the context of sustainability	Scientific reasoning
PSO 7	Capability to design, conduct and present field work/survey projects and research projects	Research related skills/self-relative learning
PSO 8	Develop team work and leadership qualities through seminars, outdoor practicals, field work and study tours	Team work /leadership qualities
PSO 9	Evaluate human impacts on environment and develop sustainable resolves	Reflective thinking/
PSO 10	Creating skills for professional careers in the field of environmental management, rural development, urban planning, geospatial technologies, cartography, field survey techniques, disaster management, tourism sector etc	Preparation for livelihoods/lifelong learnings

Structure of the Programme

The detailed framework of Undergraduate (B.A.) Degree Programme in Geography

Level	Sem	DSE Subject-1	DSE Subject -2	DSE Subject -3	GE/OE	SEC	IKS	AEC	VEC	CC	Total
4.5/ 100	**I**	**GEO-101-T** Introduction to Physical Geography [2 T] **GEO-102-P** Practicals in Physical Geography [2 P]	2(T) + 2(P)	2(T) + 2(P)	**OE-101-GEO** Geography of Tourism [2 T]	**SEC-101-GEO** Introduction to Water analysis [2 T]	2 (T) Generic	2 T	2	-	**22**
	II	**GEO-151-T** Introduction to Human Geography [2 T] **GEO-152-P** Practicals in Human Geography [2 P]	2(T) + 2(P)	2(T) + 2(P)	**OE-151-GEO** Practicals in Tourism Geography [2 P]	**SEC-151-GEO** Practicals in Water Analysis [2 P]	-	2 T	2	2	**22**

Exit option: Award of UG Certificate in Major with 44 credits and an additional 4 credits Course NSQF courses/Internship OR Continue with Major and Minor

Continue Option: Students will select one subject among the (subject-1, subject-2 and subject-3) as a major and another as minor and third subject will be dropped.

Important instructions:

a. For the practical courses teaching batch size: 15 students per batch

Structure of the Programme

The detailed framework of Undergraduate (B.A.) Degree Programme in Geography

Continued …..

Level	Sem	Credits Related to Major				Minor	GE/OE	SEC	IKS	AEC	VEC	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/ CEP								
5.0/ 200	III	**GEO-201-MJ** Introduction to Population and Settlement Geography [4T] **GEO-202-MJP** Practicals in Population and Settlement Geography [2P]		**(Select any one of the following)** **GEO-221-VSC** Introduction to Cartography [2T] ***OR*** **GEO-222-VSC** Land Measurement and Surveying [2T]	**GEO-231-FP** Field Visit and Report Writing [2FP]	**GEO 241 MN** Geography of India [2T] **GEO 242 MNP** Practicals in Map Reading [2P]	**GEO-201-OE** Political Geography [2T]		**GEO-201-IKS** Development of Indian Geographical Knowledge [2T]	2 T	-	2	22
	IV	**GEO-251-MJ** Introduction to Geomorphology [4 T] **GEO-252-MJP** Practicals in Geomorphology [2 P]		**(Select any one of the following)** **GEO 271 VSC** Practicals in Cartography [2 P] ***OR*** **GEO 272 VSC** Practicals in Land Measurement and Surveying [2P]	**GEO-281-CEP** Community Engagement Programme [2 CEP]	**GEO-291-MN** Geography of Maharashtra [2 T] **GEO-292-MNP** Practical in Statistical analysis [2P]	**GEO-251-OE** Applications of GPS [2P]	**GEO-251-SEC** Practicals in Weather Reports [2P]	-	2 T	-	2	22
Exit option: Award of UG Diploma in Major and Minor with 88 credits and an additional 4 credits Course NSQF courses/Internship OR Continue with Major and Minor													

Structure of the Programme

The detailed framework of Undergraduate (B.A.) Degree Programme in Geography

Continued …

Level	Sem.	Credits Related to Major				Minor	DSE 2 & 3	GE/ OE	SEC	IKS	AEC	VEC	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/ CEP									
5.5 / 300	V	**GEO-301-MJ** Geography of India [4T] **GEO-302-MJ** Soil Geography [4 T] **GEO-303-MJP** Practicals in Map Projections and Statistical Analysis [4 P]	**(Select any one of the following)** **GEO-310-MJ** Climatology [2 T] ***OR*** **GEO-311-MJ** Introduction to GIS [2 T] **(Select any one of the following)** **GEO-312-MJP** Practicals in Climatology [2 P] **OR** **GEO(A) 313 MJP** Practicals in GIS [2 P]	**(Select any one of the following)** **GEO-321-VSC** Introduction to GPS [2 T] ***OR*** **GEO-322-VSC** Tourism Geography [2 T]	**GEO-331-FP/CEP** Field visit and report writing [2 FP]	**GEO-341-MN** Environmental Geography [2 T]									22
	VI	**GEO-351-MJ** Watershed Management [4T] **GEO-352-MJ** Agriculture Geography [4 T] **GEO-353-MJP** Practicals in Spatial Analysis [4 P]	**(Select any one of the following)** **GEO-360-MJ** Geography of Disaster Management [2 T] ***OR*** **GEO-361-MJ** Introduction to Remote Sensing [2 T] **(Select any one of the following)** **GEO-362-MJP** Practicals in Watershed Management [2 P] ***OR*** **GEO-363-MJP** Practicals in Remote Sensing [2 P]	**(Select any one of the following)** **GEO-371-VSC** Practicals in Advanced Surveying [2 P] ***OR*** **GEO-372-VSC** Practical's in Tour Planning [2 P]	**GEO-381-OJT** [4 OJT]									22
Total 3 Year		**44**	**8**	**8**	**10**	**18**	**8**	**8**	**6**	**4**	**8**	**4**	**6**	**132**

Exit option: Award of UG Degree in Major with 132 credits and an additional 4 credits Course NSQF courses/Internship OR Continue with Major and Minor

Assessment and examination pattern

Examination Pattern:

2 Credits Course Examination Pattern:			
Evaluation Details	Total Marks	Internal Examination **(Continuous Internal Evaluation)**	External Examination **(End Semester University Examinations)**
Total Marks	50	15	35
Marks for passing	20	06	14
Examination Evaluation Pattern		▪ Class test/examination - Short Questions, Quizzes, MCQs :Marks – 10 ▪ Home assignment /Oral examination/ Students seminar/ presentation/field visit/survey/project work :Marks – 05	Q.1 Answer the following question in 20 words (any five) Marks – 10 Q.2 Answer the following question in 50 words (any two) Marks – 10 Q.3 Answer the following question in 100 words (any two) Marks – 15
4 Credits Course Examination Pattern:			
Evaluation Details	Total Marks	Internal Examination **(Continuous Internal Evaluation)**	External Examination **(End Semester University Examinations)**
Total Marks	100	30	70
Marks for passing	40	12	28
		▪ Tutorial/examination Short Questions, Quizzes, MCQs :Marks – 20 ▪ Home assignment /Oral examination/ Students seminar/ presentation/field visit/survey/project work :Marks – 10	Q.1 Answer the following question in 20 words (any eight) Marks – 16 Q.2 Answer the following question in 50 words (any four) Marks – 16 Q.3 Answer the following question in 100 words (any two) Marks – 18 Q.4 Answer the following question in 300 words (any one) Marks – 20

Important instructions:

a. It is mandatory to have a certified journal during the practical examination for practical courses.

b. Both practical & theory courses have internal and external examination and evaluation pattern

c. Practical course external examination pattern (Skelton) will be provided by BOS Geography before the end semester examination

d. For the practical courses batch size: 15 students per batch.

Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A
Semester	**:**	I
Name of Vertical Group	**:**	V 1
Course Code	**:**	**SEC-101-GEO**
Course Title	**:**	Introduction to Water Analysis
Type of course	**:**	Theory
Total Credits	**:**	02
Workload	**:**	Total Workload: -2 credits x 15 hours = 30 hours in semester

Objectives of the Course:

1. To understand water quality parameters.
2. To learn various types and sources of water
3. To learn various quality indices useful for drinking and irrigation water analysis.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Parameters of water quality	i. Parameters of water quality: a. Physical, b. Chemical, c. Biological, ii. Significance of water analysis	10
2	Types of water sources and pollutions	i. Types of water sources, occurrence, and importance ii. Water pollution: source, types, and management	06
3	Standards of water quality	i. BIS (Bureau of Indian Standards) ii. WHO (World Health Organization)	04
4	Characteristics of Water quality indices	i. Indices for drinking water a. WQI ii. Indices for irrigation water a. Sodium Adsorption Ratio (SAR) (Richards 1954), b. Residual Sodium Carbonate (RSC) (Eaton 1950), c. Sodium Percentage (SP) (Wilcox 1955), d. Kelly's ratio (Kelly 1963)	10

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Comprehensive understanding of various water quality parameters useful for assessment of water resources.

CO 2 : Understand water quality standards of BIS and WHO.

CO 3 : Understand the characteristics of water quality indices for drinking water and irrigation.

References:

1. Standard Methods for the Examination of Water and Wastewater - American Public Health Association, American Water Works Association, Water Environment Federation.
2. Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring - Deborah V. Chapman (Editor).
3. Water Quality: Guidelines, Standards and Health - Lorna Fewtrell and Jamie Bartram.
4. Environmental Engineering: Water, Wastewater, Soil and Groundwater Treatment and Remediation - Nelson L. Nemerow and Franklin J. Agardy.
5. BIS 10500:2012 - Drinking Water Specification
6. BIS 2296:1982 - Specifications for Packaged Natural Mineral Water
7. BIS 3025:1983 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water
8. BIS 3589:2001 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water (Revision of IS 3025)
9. BIS 1622:2008 - Drinking Water - Specification
10. BIS 3025:1964 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	II
Name of Vertical Group	**:**	SEC
Course Code	**:**	**SEC-151-GEO**
Course Title	**:**	Practicals in water analysis
Type of course	**:**	Practical
Total Credits	**:**	02
Workload	**:**	Total Workload: -2 credits x 30 hours = 60 hours in semester

Objectives of the Course:

1. To identify and explain key water quality parameters.
2. To learn various quality indices useful for drinking and irrigation water analysis.
3. To train the students for the interpretation of water quality data with the comparison of regulatory standards.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Introduction to water quality	i. Definition ii. Water quality parameters: Physical, Chemical iii. Standards of water quality assessment: BIS (Bureau of Indian Standards) and WHO (World Health Organization) iv. Classification of water qualities	16
2	Water quality analysis for drinking water	iii. Calculation of WQI using weighted parameters iv. Gibbs Analysis	20
3	Water quality analysis for irrigation	i. Calculate, and compare WHO standards and interpret two examples of each following indices a. Sodium Adsorption Ratio (SAR) (Richards 1954), b. Residual Sodium Carbonate (RSC) (Eaton 1950), c. Sodium Percentage (SP) (Wilcox 1955), d. Kelly's ratio (Kelly 1963),	24

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Comprehensive understanding of various quality indices useful for assessment of water resources.

CO 2 : Select and calculate appropriate water quality indices based on specific objectives and available data.

CO 3 : Interpret the overall water qualities with a comparison of BIS and WHO standards.

References:

1. Standard Methods for the Examination of Water and Wastewater - American Public Health Association, American Water Works Association, Water Environment Federation.
2. Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring - Deborah V. Chapman (Editor).
3. Water Quality: Guidelines, Standards and Health - Lorna Fewtrell and Jamie Bartram.
4. Environmental Engineering: Water, Wastewater, Soil and Groundwater Treatment and Remediation - Nelson L. Nemerow and Franklin J. Agardy.
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